

**NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT**

Project Title: Effectiveness of Bus Nubs for Bus Stops - Mod.1	
RFP Number: 2000-25	NJDOT Research Project Manager: Vincent Nichnadowicz
Task Order Number/Study Number: NCTIP-43	Principal Investigator: Daniel, Janice R.
Project Starting Date: 1/02/2002	Period Starting Date: 7/01/2004
Original Project Ending Date: 12/30/2003	Period Ending Date: 9/30/2004
Modified Completion Date: 6/30/2004	

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Task A. Perform a literature review.	5%	0	100%	5%
Task 1. Identify a limited number of urban bus stop locations that could be considered for bus nub installation.	10%	0	100	10%
Task 2. Develop from the literature or elsewhere a specification document that provides measurements and guidance for proposed test bus nubs to be built.	10%	0	100	10%
Task 3. Prepare plans in sufficient detail for the agreed upon test nubs to allow for contractor installation.	5%	0	70	3.5%
Task 4. Develop a methodology to evaluate effectiveness of the alternate	5%	0	100	5%
Task 5. Conduct a before data collection	10%	0	120	12%
Task 6. Install bus nubs.	20%	0%	0%	0%
Task 7. Conduct an after data collection.	10%	0%	0%	0%
Task 8. Analyze the data.	10%	25	132	13.2
Task 9. With the assistance of NJDOT and NJ Transit, develop for general publication a document explaining the rules and guidelines for the use of	5%	0%	0%	0%
Task 10. Prepare a project schedule to submit a quarterly, interim and final report that document the entire research effort.	10%	80	100	10
Final Report				
TOTAL	100 %			68.7 %

Project Objectives:

The objective of this research is to determine the effectiveness of and safety risks associated with bus nubs. The research will focus on the following: (1) Identifying and evaluating factors under which bus nubs result in changes in travel speeds for both buses and other vehicular traffic; (2) Assessing factors that impact the safety risks of bus nubs for drivers and bus passengers compared to conventional bus stops; (3) Determining the impacts of the bus

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nubs on passenger comfort; and (4) Developing guidelines and procedures for the implementation and use of bus nubs in New Jersey.

Project Abstract:

Bus nubs represent one type of bus stop design that is appropriate for use under certain transit, roadway and sidewalk conditions. Under this design, the sidewalk at an intersection is extended into the street to a distance equal to the depth of a typical parallel parking space. Buses stop in the traffic lane instead of weaving into and out of the bus stop. Bus nubs create additional space to include bus stop amenities such as shelters and benches and also reduce the crossing distance of pedestrians at the intersection. The primary motivation for installing bus nubs is to reduce sidewalk congestion and to improve transit operation by reducing bus delays through the elimination of bus-weaving maneuvers into and out of a curbside bus stop. The objective of this research is to determine the effectiveness of and safety risks associated with bus nubs. Bus nubs will be installed at locations in New Jersey. A field evaluation of roadway and sidewalk conditions at the bus nub location before and after installation will be performed. Users of the bus nub will be surveyed to determine the perception of the effectiveness of the bus nub for varying user groups.

1. Progress this quarter by task:

Comments received by NJ Transit in July were addressed and a third revision of the Draft Final Report is anticipated to be submitted in early September.

2. Proposed activities for next quarter by task:

This project ended on June 30, 2004. Pending approval of the submitted Draft Final Report, the Final Draft Report and Tech Brief will be submitted.

3. List of deliverables provided in this quarter by task (product date):

None

4. Progress on implementation and training activities:

None

5. Problems/proposed solutions:

The Tasks and percentage completion of the tasks reflect the original scope of this project. Due to the inability of NJDOT/NJ Transit to construct the bus nubs, the tasks no longer reflect the current focus of the research. The percent complete reflects the completion based on the old list of tasks, but does not reflect the percent completion based on the current focus of the research.

6. Budget summary:

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Total Project Budget	\$124,630.00
Modified Contract Amount	\$0.00
Total Project Expenditure to date	\$113,039.00
% of Total Project Budget Expended	90.70%